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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,742	06/20/2001	Zhan He	1101.011	5585
26665	7590	08/27/2004	EXAMINER	
REVEO, INC. 85 EXECUTIVE BOULEVARD ELMSFORD, NY 10523			PERALTA, GINETTE	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,742

Applicant(s)

HE ET AL.

Examiner

Ginette Peralta

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31, 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokoyama et al. (U. S. Pat. 6,507,379 B1).

Regarding claims 1 and 38, Yokoyama et al. discloses in Fig. 5, and embodiment 4 a backlight for a liquid crystal display that comprises an organic electroluminescent device 11; and a cholesteric liquid crystal polarizing device 13.

Regarding claim 2, Yokoyama et al. discloses that in the embodiment all of the light that would otherwise fail to pass through the polarizing plate and be absorbed can be supplied by optical modulation and results in an image twice as bright, and theoretically the maximum light efficiency of the backlight unit is about 100%.

Regarding claim 3, Yokoyama et al. discloses a liquid crystal display comprising the backlight device of claim 1.

Regarding claim 4, Yokoyama et al. discloses that the organic electroluminescent device comprises an organic electroluminescent material layer 112 superposed between a cathode and an anode layer, 111 and 113.

Regarding claim 5, Yokoyama et al. discloses that anode layer 111 is the same material as layer 101, which comprises indium tin oxide and cathode layer 113, comprises the same material as layer 105, which comprises a metal.

Regarding claim 6, Yokoyama et al. discloses that the cathode and the anode layers are connected to a power supply (col. 8, ll. 29-31).

Regarding claim 7, the cholesteric liquid crystal polarizing device taught by Yokoyama et al is a broadband polarizing device.

Claim Rejections - 35 USC § 103

3. Claims 8-17, 19-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. as applied to claims 1-7 and 38 above, and further in view of Faris (U. S. Pat. 6,188,460 B1).

Yokoyama et al. discloses in Fig. 5, and embodiment 4 a backlight for a liquid crystal display that comprises an organic electroluminescent device 11; and a cholesteric liquid crystal polarizing device 13.

Yokoyama et al. discloses the claimed invention with the exception of teaching the cholesteric liquid crystal polarizing device as a narrowband polarizing device.

Faris discloses a liquid crystal display device that comprises a backlight device and a cholesteric liquid crystal polarizing layer, wherein the polarizing device could be a broadband polarizing device or a narrowband polarizing device wherein both alternatives are taught for the disclosed intended purpose of providing alternate embodiments for a polarizing reflective spectral filter element where the polarizer are used for reflecting without absorption back along the projection axis into the backlighting structure, wherein the structure further comprises a plurality of pixel regions, and a repeating array of red pixels, green pixels and blue pixels which reflect circularly polarized red, green and blue light, respectively.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either a broadband polarizer or a narrowband polarizer as Faris discloses that these two polarizers are alternatives in a backlighting structure and to have a plurality of pixel regions and an array of red pixels, green pixels and blue pixels which reflect circularly polarized red, green, and blue light, wherein these characteristics are taught for the disclosed intended purpose of forming a structure that is used for reflecting without absorption back along the projection axis into the backlighting structure and thus employing systemic light recycling.

Yokoyama et al. as modified by Faris discloses that the cholesteric liquid crystal polarizing device comprises multiple cholesteric liquid crystal polarizing layers, the backlight further comprising a diffuser element.

4. Claims 18, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. in view of Faris as applied to claims 1-17 and 38 above, and further in view of Jiang et al. (US Pat. Pub. 2002/0075434 A1).

Yokoyama et al. discloses in Fig. 5, and embodiment 4 a backlight for a liquid crystal display that comprises an organic electroluminescent device 11; and a cholesteric liquid crystal polarizing device 13.

Yokoyama et al. discloses the claimed invention with the exception of teaching the cholesteric liquid crystal polarizing device as a narrowband polarizing device.

Faris discloses a liquid crystal display device that comprises a backlight device and a cholesteric liquid crystal polarizing layer, wherein the polarizing device could be a broadband polarizing device or a narrowband polarizing device wherein both alternatives are taught for the disclosed intended purpose of providing alternate embodiments for a polarizing reflective spectral filter element where the polarizer are used for reflecting without absorption back along the projection axis into the backlighting structure, wherein the structure further comprises a plurality of pixel regions, and a repeating array of red pixels, green pixels and blue pixels which reflect circularly polarized red, green and blue light, respectively.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either a broadband polarizer or a narrowband polarizer as Faris discloses that these two polarizers are alternatives in a backlighting structure and to have a plurality of pixel regions and an array of red pixels, green pixels and blue

pixels which reflect circularly polarized red, green, and blue light, wherein these characteristics are taught for the disclosed intended purpose of forming a structure that is used for reflecting without absorption back along the projection axis into the backlighting structure and thus employing systemic light recycling.

Yokoyama et al. as modified by Faris discloses that the cholesteric liquid crystal polarizing device comprises multiple cholesteric liquid crystal polarizing layers, the backlight further comprising a diffuser element.

Yokoyama et al. discloses the claimed invention with the exception that the structure further comprises a quarter-wave retarder.

Jiang et al. discloses a liquid crystal display structure that comprises a backlight device which includes a cholesteric liquid crystal display element and a quarter-wave retarder, wherein the quarter-wave retarder is used for the disclosed intended purpose of rotating the polarization direction of the linearly polarized light and allowing for the transmission of the linearly polarized light.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a quarter-wave retarder in the structure of Broer et al. as modified by Noguchi et al. for the disclosed intended purpose of rotating the polarization direction of the linearly polarized light and allowing for the transmission of the linearly polarized light.

Yokoyama et al., further teaches a liquid crystal display comprising the backlight device.

Yokoyama et al. further teaches that the organic electroluminescent device comprises an organic electroluminescent material layer superposed between a cathode and an anode layer, and that one or both of the materials of the cathode and anode are transparent.

Response to Arguments

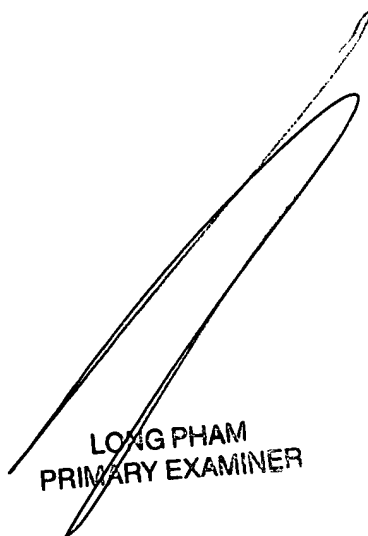
5. Applicant's arguments with respect to claims 1-31, and 38 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginette Peralta whose telephone number is (571)272-1713. The examiner can normally be reached on Monday to Friday 8:00 AM- 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571)272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GP



LONG PHAM
PRIMARY EXAMINER